

Christopher R. Culpepper

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CAREER OBJECTIVE

To continue my career in the field of Systems or Computer Engineering designing electronic hardware, working in the RF domain, or creating embedded software, preferably in aerospace.

EXPERIENCE

Systems Engineer

July 2013 - Present

General Dynamics Mission Systems, Pittsfield MA

- Performed integration and repair operations on legacy hardware
- Diagnosed build issues with hardware and software installations
- Performed software and systems testing on weapon control software
- Managed requirements and test cases
- Developed automated testing tracker that was used to present testing progress to management

Test Engineer Co-op

January 2016 - May 2016

Space Exploration Technologies, Hawthorne CA

- Created software to automate the creation of trouble reports
- Developed tests to test flight avionics hardware
- Troubleshoot issues with avionics test racks

PROJECTS

High Altitude Balloon Telemetry Tracker

- Personally developed hardware and software design and implementation
- Developed radio board to have the ability to use FSK, AFSK, or audio-based protocols
- Utilized multiple PCBs in order to separate functionality and increase reusability
- Can communicate GPS and other sensor data to the Amateur Radio APRS network

Wideband Oxygen Sensor Controller

- Designed, built and programmed sensor controller that measured oxygen concentration
- Incorporated PID loops to keep a sensor at a constant temperature and oxygen concentration
- Could have been calibrated to measure accurate oxygen concentrations

Assembly Language Pong Game

- Created a 1.5D Pong game for a school project in HCS12 assembly
- Required HCS12 assembly, PWM, ADC and digital output

Radio-Internet Hotspot Transceiver (Multidisciplinary Senior Design)

- Worked as a team leader to complete self-appointed tasks
- Completed final PCB design, layout, assembly and test (It worked!)
- Device acted as an audio bridge between RF and the Allstar radio network
- Completed entire design process from customer requirements to prototyping and handoff.

AWARDS & SKILLS

Eagle Scout

A+ Certified

Languages & Software:

C
Linux
Kicad PCB Design Software
VHDL
Python

Microsoft Office
Visual Basic for Applications (VBA)
ARM & HCS12 Assembly
DOORs Requirement Management
Networking Equipment Configuration

EDUCATION

Bachelor of Science, Computer Engineering

Rochester Institute of Technology, Rochester NY, Graduated May 2017

Interface and Digital Electronics
Data Communication and Networks
Introduction to Software Engineering
Digital System Design

Assembly Language Programming
Digital IC Design
Cyborg Theory
HW & SW Design for Crypto Applications

COMMUNITY SERVICE

Assistant Scoutmaster at Boy Scout Troop 88, North Adams, MA

- Mentored Scouts to achieve rank and acquire valuable life skills

Radio Communication at Multiple Road Rallies

- Operated in a high-stress environment to prevent accidents and mistakes
- Responsible for maintaining communication for racing stages and to central management
- Relayed pertinent information to competitors, stage captain and race officials

PERSONAL INTERESTS AND HOBBIES

Working towards pilot licence
Amateur Radio Extra
Motorcycle and automobile repair

Camping and hiking
Film photography
Licked thing that was in space